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A Synopsis of the Tribe Euplectrini (Hymenoptera eulophidae) of Sri Lanka

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ABSTRACT. Euplectrini solitary ectoparasites have been identified as important insect parasites of tea in Sri Lanka. In a taxonomic study of the tribe Euplectrini of Sri Lanka four genera were recognized. They were Euplectrus, Euplectromorpha, Metaplectrus, and Platyplectrus and one species each of Euplectrus and Euplectromorpha were previously recorded from Sri Lanka. Eight new Sri Lankan Euplectrus species were described. Two species previously recorded from India: Euplectrus euplexiae and Euplectrus leucostomus were recorded from Sri Lanka. Taxonomic status of three Euplectrus species was not determined. New species of Euplectromorpha, Metaplectrus, and Platyplectrus, respectively were also described from Sri Lanka. Platyplectrus viridiceps, previously recorded from India and Malaysia was also reported. A pictorial key for identification of Sri Lankan Euplectrini genera was prepared.

INTRODUCTION

Euplectrini are solitary or gregarious external parasites of free living lepidopterous larvae. They are polyphagus or oligophagus. The biology of few Euplectrini has been studied including *Neoplectrus maculatus* Gadd (= *Euplectromorpha maculatus*), *Platyplectrus natadae* Ferriere, which are parasitic on *Macroptera nararia* (Moore) (= *Natada nararia*) and *Autoplectrus taprobances* Gadd (= *Platyplectrus taprobanes*) a parasite of *Thosea cervina* Moore. (Gadd *et al.*, 1946). These parasites are very interesting not only because they are among very rare *chalcidoidea* which are ectoparasitic and enclose their pupae in a cocoon, but also behaving as predators by feeding on body fluids of host larvae.

In the first major taxonomic study of the tribe Euplectrini by Ferriere (1941), four species belonging to genera *Euplectrus* westwood, *Metaplectrus* Ferriere, *Neoplectrus* Ferriere, and *Platyplectrus* Ferriere were identified from Sri Lanka. Later Gadd (1945) identified single species in a new genus which he named *Autoplectrus* and another new

species of *Matuplectrus*. These studies were based on limited number of specimens collected from the tea plantations of Sri Lanka. No attempt has been made to study Sri Lankan Euplectrini since Gadd in 1945. Following Boucek's reclassification of the tribe (Boucek 1988), previously described species are now represented in Sri Lanka by: one species each of *Euplectrus* westwood and *Euplectromorpha* Girault, and two species each of *Metaplectrus* Ferriere and *Platyplectrus* Ferriere. *Aroplectrus* Lin (1963) and *Awara* Boucek (1988) have not yet been found in Sri Lanka.

For the present study, experimental collection of Euplectrini was carried out during the period August 1987 to April 1988, using a sweep net and D-vac Suction machine. Collections were made in each province of the country except in Northern and Eastern provinces. When possible collections were made in different agro-ecological zones within each province. In each agroecological region three major habitats were sampled *i.e.* cultivated fields, fallow lands and forests. A small collection of identified Sri Lankan Euplectrini was found in the Tea Research Institute insect collection. No specimens of *Autoplectrus taprobanes* Gadd (= *Platyplectrus taprobanes*) was found. Hence this species is treated as an unplaced species.

RESULTS AND DISCUSSION

Tribe Euplectrini

All species in this tribe can be easily distinguished from other elophids by the following combination of characters; hind coxa greatly enlarged, hind tibia with enlarged elongated spurs in some species two hind tibial spurs are replaced by one stout spur, longer spur sometimes longer than first two tarsal segments together; first tarsal segment of hind tibia as long as or longer than second tarsal segment; mandibles reduced without teeth; notuli complete.

Euplectrus Westwood

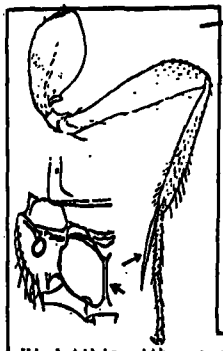
Euplectrus westwood, 1832: 128.
Type species (*Euplectrus maculiventris* westwood) = *Pteromalus bicolor* Swedorus, by monotypy.

A pictorial key for identification of
Euplectrini genera in Sri Lanka

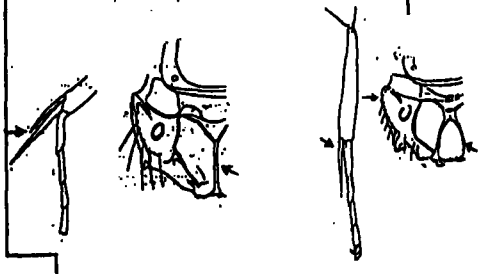
GENERA INDT.

Scutellum without Longitudinal sublateral furrows. EUPLECTRUS

Scutellum with distinct sublateral furrows.



Hind tibia with one spur propodeum with median carina METAPLECTRUS



Hind tibia mostly with two spurs. If with only one spur then propodeum always without median carina.

Propodeum without median carina Hind tibia with one or two sprus. EUPLECTROMORPHA

Propodeum with median carina. Hind tibia always with two spurs. PLATYPLECTRUS

Diplectron Dahlbom, 1857: 292. Synonymy by Gahan & Fagan 1923.
Type species. *Pteromalus* bicolor Swederus. Designated by Gahan and Fagan 1923.

Pachyscapha Howard 1897: 159. Synonymy by Pack, 1951.
Type species *Pachyscapha insularis* Haward by monotypy.

Rekabia Cameron, 1904: 65. Synonymy by Kerrich, 1974.
Type species *Rekabia testaceips* Cameron by monotypy.

Heteroscapus Brether, 1918: 9 Synonymy by De Sautis, 1981.
Type species Heteroscapus ronani Brethes By monotypy.

Diagnosis : Thorax always black; Prithorax reduced with a transverse carina always present Santillum without Sublateral Congitudinal furrows. Legs always yellow or yellowish brown, propodeum with well developed median carina, hind tibia always with two well developed spurs.

Fourteen species of *Euplectrus* were identified. This includes *Euplectrus* Ceylonensis Haward, *Euplectrus euplexiae* Rhower and *Euplectrus lencoctomus* Rhower of which last two species were not recorded from Sri Lanka previously. Out of other 11 species 8 species were described new. And taxonomic status of 3 species was not determined. This is because to obtain type specimen of some Indian species we not available. A key for identification of Sri Lanka Euplectrini, including indetermined species was developed.

Euplectromorpha Girault

Euplectromorpha Girault 1913: 276
Type species. *Euplectromorpha unifasciata* Girault orig. desig.

Euplectromorpha Girault 1915: 278
Introduced as a new genus by error.

Neoplectrus Ferriere, 1940: 134. Synonymy by Boncek, 1988
Type species *Neoplectrus bicarinatus* Ferriere
Designated by Lin 1963.

Diagnosis: This genus can easily be identified by the propodeum without a median carina. Two sublateral carina enclose a median areda on propodeum. Hind tibia with two long spurs or single long spur, colour varies from black to yellow.

Four *Euplectromorpha* species were identified including previously described *Euplectromorpha maculatus* (Ferriere). Three species described as new key for identification of species was developed.

Metuplectrus Ferriere

Metaplectrus Ferriere 1941: 19
Type species. *Metuplectrus thoseae* Ferriere
By monotype.

Diagnosis: Genus *Metaplectrus* can be distinguished by always having single long spur of hind tibia coupled with complete median carina of the propodeum. Known species are all yellow or orange with few black spots in some species.

There are two already described species in Sri Lanka. *Metaplectrus thoseae* and *Metaplectrus solitarius* Gadd. One new species was described and a key for species identification is developed.

Platyplectrus Ferriere

Platyplectrus Ferriere. 1941: 20
Type species *Platyplectrus nutadae* Ferriere
orig. desig.

Autoplectrus Gadd, 1945: 336. Synonymy by Boncek 1988.
Type species *Autoplectrus tabrobanes*
Gadd. Orig. desig.

Trichoplectrus Erdos, 1951: 170 (as subgenus of *Euplectromospha*)
Synonymy by Boucek 1988.

Euplectromorpha of Ferriere 1941. Synonymy by Boucek 1988.

Diagnosis: *Platyplectrus* can be distinguished by the combination of following characters: Scutellum with distinct sublateral longitudinal furrows; propodeum with complete median carina; hind tibia always with two elongated spurs. Colour varies from completely black to yellow.

Two already described *Platyplectrus nutadae* Ferriere and *Platyplectrus viridiceps* (Ferriere) were among the collected *platyplectrus* species. *P. viridiceps* previously recorded from India and Malaysia is a new record for Sri Lanka. *Platyplectrus taparabanes* (Gadd) is treated as an unplaced species since no identified material of this was found. In addition 8 *platyplectrus* species described as new. Key for identification of all species except *P. taprabanes* (Gadd) was developed.

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